Planetary Science Subcommittee

Jonathan I. Lunine

Member

New Frontiers and Flagships

- Existing New Frontiers missions--New Horizons, Jun. Juno was $750M in FY 03$ = 850M RY$.
- Cannot be used for orbiter missions to the outer solar system, or long-lived Venus surface missions, but fills a useful niche for science too ambitious for Discovery.
- List of New Frontiers missions will be refreshed by decadal surveys.
  - –Saturn flyby with shallow probes
  - –Comet surface sample return
  - –Venus in-situ Explorer
  - –South Pole Aitken Basin
- We endorse the New Frontiers Program as it is. It should not be expanded in an attempt to accommodate Flagship-class goals and objectives.
- ∞Flagship missions are required to address the fundamental scientific objectives of solar system exploration and must be accommodated within any long-range strategic plan.

SMD Plan

- Excellent draft; consistent with decadal survey, community roadmap
- Proposed changes
  - – Priority list should not include Moon Mineralogical Mapper because of cost-scale differences. Otherwise OK
  - – Add paragraph to Strategic Plan R&A section “Recent cuts to the R&A Program have adversely affected NASA’s ability to analyze data and materials returned from missions and to lay the foundations for future missions.”
  - –Mars language needs to be changed, along with adding a statement about balance between detailed single-body investigation and broader-based exploration of multiple bodies (see next page for Mars language)

Mars is the highest priority target within the Solar System, and the exploration of Mars is an essential part of the Planetary Science Division's strategy for achieving its goals because all of the Planetary Science Division's fundamental science questions may be partially addressed there, it presents frequent launch opportunities, and its surface is easily accessed.

Within solar system exploration, Mars is the highest priority target for detailed investigation

- –The ability to address all five scientific objectives at Mars, coupled with its accessibility, make Mars a unique scientific target in the solar system.
- –Mars exploration has progressed to the level where scientific investigations require multiple assets that form a temporally and spatially interrelated infrastructure on the surface and in orbit.
- –Mars is specifically called out as a high priority target in the VSE.

Venue for Lunar Workshop

- Easy access/large conference capability, not Houston or DC
- Potential for post-conference field trips to geologic sites, observatories
- *Hawaii: Volcanoes NP+ Mauna Kea Observatory*
- *Tucson: El Pinacate BR (Mex) +Mount Graham International Observatory*
- *Albuquerque: Zuni-Bandera Volcanic Field+ VLA*